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=> file caplus; d que l9; d que l12; d que l14; d que l22; d que l23
FILE 'CAPLUS' ENTERED AT 16:27:48 ON 11 APR 2003
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FILE COVERS 1907 - 11 Apr 2003  VOL 138 ISS 16
FILE LAST UPDATED: 10 Apr 2003  (20030410/ED)
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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L4        201511 SEA FILE=CAPLUS ABB=ON  PLU=ON  CATTLE OR BOVINE OR BOVID OR
                 BOS
L5         11636 SEA FILE=CAPLUS ABB=ON  PLU=ON  PLASMID VECTORS/CT
L6            85 SEA FILE=CAPLUS ABB=ON  PLU=ON  BOVINE PARAINFLUENZA VIRUS 3
                 OR BOVINE PARAINFLUENZA 3 VIRUS
L7          1326 SEA FILE=CAPLUS ABB=ON  PLU=ON  (HN OR F) (W) PROTEIN
L8            10 SEA FILE=CAPLUS ABB=ON  PLU=ON  L4 AND L5 AND (L6 OR L7)
L9             6 SEA FILE=CAPLUS ABB=ON  PLU=ON  L8 NOT (SWINEPOX OR FOWLPOX)/TI


L4        201511 SEA FILE=CAPLUS ABB=ON  PLU=ON  CATTLE OR BOVINE OR BOVID OR
                 BOS
L6            85 SEA FILE=CAPLUS ABB=ON  PLU=ON  BOVINE PARAINFLUENZA VIRUS 3
                 OR BOVINE PARAINFLUENZA 3 VIRUS
L7          1326 SEA FILE=CAPLUS ABB=ON  PLU=ON  (HN OR F) (W) PROTEIN
L10         3613 SEA FILE=CAPLUS ABB=ON  PLU=ON  GENE, MICROBIAL/CT (L) THU/RL
L11           15 SEA FILE=CAPLUS ABB=ON  PLU=ON  L4 AND L10 AND (L6 OR L7)
L12            6 SEA FILE=CAPLUS ABB=ON  PLU=ON  L11 AND (PIV? OR "F PROSTAGLAND
                 INS"/CT OR ADENOVIRUSE OR PARAINFLUENZA)/TI


L6            85 SEA FILE=CAPLUS ABB=ON  PLU=ON  BOVINE PARAINFLUENZA VIRUS 3
                 OR BOVINE PARAINFLUENZA 3 VIRUS
L7          1326 SEA FILE=CAPLUS ABB=ON  PLU=ON  (HN OR F) (W) PROTEIN
L13           32 SEA FILE=CAPLUS ABB=ON  PLU=ON  VIRUS VECTORS/CT (L) BOVINE
L14            7 SEA FILE=CAPLUS ABB=ON  PLU=ON  L13 AND (L6 OR L7)


L4        201511 SEA FILE=CAPLUS ABB=ON  PLU=ON  CATTLE OR BOVINE OR BOVID OR
                 BOS
L15         960 SEA FILE=CAPLUS ABB=ON  PLU=ON  GLYCOPROTEINS/CW (L) BOVINE
L19        3066 SEA FILE=CAPLUS ABB=ON  PLU=ON  GLYCOPROTEINS/CW (L) THU/RL
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Prepared by Toby Port, STIC, Biotech Library 308-3534

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L20        1042 SEA FILE=CAPLUS ABB=ON  PLU=ON  GLYCOPROTEINS/CW (L) (HN OR F)

L21          14 SEA FILE=CAPLUS ABB=ON  PLU=ON  L4 AND L15 AND L19 AND L20
L22           4 SEA FILE=CAPLUS ABB=ON  PLU=ON  L21 AND (POLYVALENT OR
               CHIMERIC OR CATTLE VACCIN? OR RECOMGINANT PARA?)/TI


L4       201511 SEA FILE=CAPLUS ABB=ON  PLU=ON  CATTLE OR BOVINE OR BOVID OR
               BOS
L6           85 SEA FILE=CAPLUS ABB=ON  PLU=ON  BOVINE PARAINFLUENZA VIRUS 3
               OR BOVINE PARAINFLUENZA 3 VIRUS
L7         1326 SEA FILE=CAPLUS ABB=ON  PLU=ON  (HN OR F) (W) PROTEIN
L15         960 SEA FILE=CAPLUS ABB=ON  PLU=ON  GLYCOPROTEINS/CW (L) BOVINE
L17        3981 SEA FILE=CAPLUS ABB=ON  PLU=ON  GLYCOPROTEINS/CW (L) (THU/RL
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L18          44 SEA FILE=CAPLUS ABB=ON  PLU=ON  L4 AND L15 AND L17 AND (L6 OR
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L23           2 SEA FILE=CAPLUS ABB=ON  PLU=ON  L18 AND VECTOR VACCINES/TI

=> s l9 or l12 or l14 or l22 or l23
L72          17 L9 OR L12 OR L14 OR L22 OR L23

=> file medline; d que l28; d que l29; d que l33
FILE 'MEDLINE' ENTERED AT 16:28:38 ON 11 APR 2003

  FILE LAST UPDATED: 10 APR 2003 (20030410/UP).  FILE COVERS 1958 TO DATE.

  On June 9, 2002, MEDLINE was reloaded.  See HELP RLOAD for details.

  MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
  MeSH 2003 vocabulary.  See http://www.nlm.nih.gov/mesh/summ2003.html
  for a description on changes.

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


L25            6 SEA FILE=MEDLINE ABB=ON  PLU=ON  PARAINFLUENZA VIRUS 3,
                 BOVINE/CT.
L28            1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L25 AND SUBSTITUTION/TI

L24       209647 SEA FILE=MEDLINE ABB=ON  PLU=ON  CATTLE/CT
L26        92505 SEA FILE=MEDLINE ABB=ON  PLU=ON  PLASMIDS+NT/CT
L27          464 SEA FILE=MEDLINE ABB=ON  PLU=ON  HN PROTEIN/CT
L29            3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L24 AND L26 AND L27


L24       209647 SEA FILE=MEDLINE ABB=ON  PLU=ON  CATTLE/CT
L26        92505 SEA FILE=MEDLINE ABB=ON  PLU=ON  PLASMIDS+NT/CT
L30         2514 SEA FILE=MEDLINE ABB=ON  PLU=ON  VACCINES, SYNTHETIC/CT AND
                 GE/CT
L32           29 SEA FILE=MEDLINE ABB=ON  PLU=ON  L24 AND L26 AND L30
L33            5 SEA FILE=MEDLINE ABB=ON  PLU=ON  L32 AND (HPIV? OR RECOMBINANT
                 BOVINE OR BRSV OR BPIV OR ALTERED)/TI
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=> s l28 or 129 or 133
L73             8 L28 OR L29 OR L33

=> file embase; d que 140; d que 141; d que 142; d que 144; d que 145
FILE 'EMBASE' ENTERED AT 16:29:10 ON 11 APR 2003
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 FILE COVERS 1974 TO 10 Apr 2003 (20030410/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


L34            72 SEA FILE=EMBASE ABB=ON  PLU=ON  BOVINE PARAINFLUENZA
L38           761 SEA FILE=EMBASE ABB=ON  PLU=ON  DNA VECTOR/CT
L40             0 SEA FILE=EMBASE ABB=ON  PLU=ON  L34 AND L38

  L34            72 SEA FILE=EMBASE ABB=ON  PLU=ON  BOVINE PARAINFLUENZA
  L37         28805 SEA FILE=EMBASE ABB=ON  PLU=ON  PLASMID/CT
  L41             0 SEA FILE=EMBASE ABB=ON  PLU=ON  L34 AND L37


  L34            72 SEA FILE=EMBASE ABB=ON  PLU=ON  BOVINE PARAINFLUENZA
  L35           133 SEA FILE=EMBASE ABB=ON  PLU=ON  HN PROTEIN/CT
  L42             1 SEA FILE=EMBASE ABB=ON  PLU=ON  L34 AND L35


  L34            72 SEA FILE=EMBASE ABB=ON  PLU=ON  BOVINE PARAINFLUENZA
  L43          1218 SEA FILE=EMBASE ABB=ON  PLU=ON  RECOMBINANT VACCINE/CT
  L44             0 SEA FILE=EMBASE ABB=ON  PLU=ON  L34 AND L43


  L34            72 SEA FILE=EMBASE ABB=ON  PLU=ON  BOVINE PARAINFLUENZA
  L36           667 SEA FILE=EMBASE ABB=ON  PLU=ON  F PROTEIN
  L45             3 SEA FILE=EMBASE ABB=ON  PLU=ON  L34 AND L36


  => s l42 or 145
  L74             4 L42 OR L45

  => file biosis; d que 156; d que 157; d que 158; d que 159
  FILE 'BIOSIS' ENTERED AT 16:30:09 ON 11 APR 2003
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  FILE COVERS 1969 TO DATE.
  CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
  FROM JANUARY 1969 TO DATE.

  RECORDS LAST ADDED: 9 April 2003 (20030409/ED)


  L46           368 SEA FILE=BIOSIS ABB=ON  PLU=ON  BOVINE (3A) PARAINFLUENZA
  L50           174 SEA FILE=BIOSIS ABB=ON  PLU=ON  GENETIC VECTOR
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L46        368 SEA FILE=BIOSIS ABB=ON  PLU=ON  BOVINE (3A) PARAINFLUENZA
L51       4310 SEA FILE=BIOSIS ABB=ON  PLU=ON  (VIRUS OR VIRAL) (A) VECTOR
L57          1 SEA FILE=BIOSIS ABB=ON  PLU=ON  L46 AND L51


L46        368 SEA FILE=BIOSIS ABB=ON  PLU=ON  BOVINE (3A) PARAINFLUENZA
L49      81083 SEA FILE=BIOSIS ABB=ON  PLU=ON  PLASMID
L55          2 SEA FILE=BIOSIS ABB=ON  PLU=ON  L46 AND L49
L58          1 SEA FILE=BIOSIS ABB=ON  PLU=ON  L55 AND DNA/TI


L46        368 SEA FILE=BIOSIS ABB=ON  PLU=ON  BOVINE (3A) PARAINFLUENZA
L47       2563 SEA FILE=BIOSIS ABB=ON  PLU=ON  HN
L59          7 SEA FILE=BIOSIS ABB=ON  PLU=ON  L46 AND L47 AND VACCINE


=> s l57 or l58 or l59
L75          8 L57 OR L58 OR L59

=> file wpid; d que l70
FILE 'WPIDS' ENTERED AT 16:30:30 ON 11 APR 2003
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FILE LAST UPDATED:          10 APR 2003      <20030410/UP>
MOST RECENT DERWENT UPDATE:     200324       <200324/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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    GUIDES, PLEASE VISIT:
    http://www.derwent.com/userguides/dwpi_guide.html <<<

L60          24 SEA FILE=WPIDS ABB=ON  PLU=ON  BOVINE PARAINFLUENZA
L61        2271 SEA FILE=WPIDS ABB=ON  PLU=ON  HN
L62      234958 SEA FILE=WPIDS ABB=ON  PLU=ON  F
L63         756 SEA FILE=WPIDS ABB=ON  PLU=ON  (L61 OR L62) (3A) PROTEIN
L64       11845 SEA FILE=WPIDS ABB=ON  PLU=ON  PLASMID
L65       59976 SEA FILE=WPIDS ABB=ON  PLU=ON  VECTOR
L66       28462 SEA FILE=WPIDS ABB=ON  PLU=ON  RECOMBINANT
L67        4503 SEA FILE=WPIDS ABB=ON  PLU=ON  CHIMER?
L68       17435 SEA FILE=WPIDS ABB=ON  PLU=ON  VACCIN?
L70          12 SEA FILE=WPIDS ABB=ON  PLU=ON  L60 AND (L61 OR L62 OR L63 OR
                L64 OR L65 OR L66 OR L67 OR L68) AND BOVINE/TI


=> dup rem l73 l72 l74 l75 l70
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Prepared by Toby Port, STIC, Biotech Library 308-3534

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FILE 'CAPLUS' ENTERED AT 16:30:54 ON 11 APR 2003
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FILE 'BIOSIS' ENTERED AT 16:30:54 ON 11 APR 2003

FILE 'WPIDS' ENTERED AT 16:30:54 ON 11 APR 2003

PROCESSING COMPLETED FOR L73
PROCESSING COMPLETED FOR L72
PROCESSING COMPLETED FOR L74
PROCESSING COMPLETED FOR L75
PROCESSING COMPLETED FOR L70
L76 37 DUP REM L73 L72 L74 L75 L70 (12 DUPLICATES REMOVED)
ANSWERS '1-8' FROM FILE MEDLINE
ANSWERS '9-25' FROM FILE CAPLUS
ANSWERS '26-27' FROM FILE EMBASE
ANSWERS '28-29' FROM FILE BIOSIS
ANSWERS '30-37' FROM FILE WPIDS

=> d ibib ab l76 1-37

L76 ANSWER 1 OF 37 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2002051326 MEDLINE
DOCUMENT NUMBER: 21635488 PubMed ID: 11773385
TITLE: Mucosal immunization of rhesus monkeys against respiratory syncytial virus subgroups A and B and human parainfluenza virus type 3 by using a live cDNA-derived vaccine based on a host range-attenuated bovine parainfluenza virus type 3 vector backbone.
AUTHOR: Schmidt Alexander C; Wenzke Daniel R; McAuliffe Josephine M; St Claire Marisa; Elkins William R; Murphy Brian R; Collins Peter L
CORPORATE SOURCE: Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20892, USA..
aschmidt@niaid.nih.gov
CONTRACT NUMBER: AI-000030 (NIAID)
AI-000087 (NIAID)
SOURCE: JOURNAL OF VIROLOGY, (2002 Feb) 76 (3) 1089-99.
Journal code: 0113724. ISSN: 0022-538X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200202
ENTRY DATE: Entered STN: 20020125
Last Updated on STN: 20020213
Entered Medline: 20020212
AB Reverse genetics was used to develop a two-component, trivalent live attenuated vaccine against human parainfluenza virus type 3 (HPIV3) and respiratory syncytial virus (RSV) subgroups A and B. The backbone for each of the two components of this vaccine was the attenuated recombinant bovine/human PIV3 (rB/HPIV3), a recombinant BPIV3 in which the bovine HN

and F protective antigens are replaced by their HPIV3 counterparts (48). This chimera retains the well-characterized host range attenuation phenotype of BPIV3, which appears to be appropriate for immunization of young infants. The open reading frames (ORFs) for the G and F major protective antigens of RSV subgroup A and B were each placed under the control of PIV3 transcription signals and inserted individually or in homologous pairs as supernumerary genes in the promoter proximal position of rB/HPIV3. The level of replication of rB/HPIV3-RSV chimeric viruses in the respiratory tract of rhesus monkeys was similar to that of their parent virus rB/HPIV3, and each of the chimeras induced a robust immune response to both RSV and HPIV3. RSV-neutralizing antibody titers induced by rB/HPIV3-RSV chimeric viruses were equivalent to those induced by infection with wild-type RSV, and HPIV3-specific antibody responses were similar to, or slightly less than, after infection with the rB/HPIV3 vector itself. This study describes a novel vaccine strategy against RSV in which vaccine viruses with a common attenuated backbone, specifically rB/HPIV3 derivatives expressing the G and/or F major protective antigens of RSV subgroup A and of RSV subgroup B, are used to immunize by the intranasal route against RSV and HPIV3, which are the first and second most important viral agents of pediatric respiratory tract disease worldwide.

L76 ANSWER 2 OF 37 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 2001222312 MEDLINE
DOCUMENT NUMBER: 21211609 PubMed ID: 11312329
TITLE: **Recombinant bovine**/human parainfluenza virus type 3 (B/**HPIV3**) expressing the respiratory syncytial virus (RSV) G and F proteins can be used to achieve simultaneous mucosal immunization against RSV and **HPIV3**.
AUTHOR: Schmidt A C; McAuliffe J M; Murphy B R; Collins P L
CORPORATE SOURCE: Laboratory of Infectious Disease, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20892, USA..
aschmidt@niaid.nih.gov
CONTRACT NUMBER: AI-000030 (NIAID)
AI-000087 (NIAID)
SOURCE: JOURNAL OF VIROLOGY, (2001 May) 75 (10) 4594-603.
Journal code: 0113724. ISSN: 0022-538X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 20010529
Last Updated on STN: 20010529
Entered Medline: 20010524
AB Recombinant bovine/human parainfluenza virus type 3 (rB/HPIV3), a recombinant bovine PIV3 (rBPIV3) in which the F and HN genes were replaced with their HPIV3 counterparts, was used to express the major protective antigens of respiratory syncytial virus (RSV) in order to create a bivalent mucosal vaccine against RSV and HPIV3. The attenuation of rB/HPIV3 is provided by the host range restriction of the BPIV3 backbone in primates. RSV G and F open reading frames (ORFs) were placed under the control of PIV3 transcription signals and inserted individually into the rB/HPIV3 genome in the promoter-proximal position preceding the nucleocapsid protein gene. The recombinant PIV3 expressing the RSV G ORF (rB/HPIV3-G1) was not restricted in its replication in vitro, whereas the virus expressing the RSV F ORF (rB/HPIV3-F1) was eightfold restricted compared to its rB/HPIV3 parent. Both viruses replicated efficiently in the respiratory tract of hamsters, and each induced RSV serum antibody

titers similar to those induced by RSV infection and anti-HPIV3 titers similar to those induced by HPIV3 infection. Immunization of hamsters with rB/HPIV3-G1, rB/HPIV3-F1, or a combination of both viruses resulted in a high level of resistance to challenge with RSV or HPIV3 28 days later. These results describe a vaccine strategy that obviates the technical challenges associated with a live attenuated RSV vaccine, providing, against the two leading viral agents of pediatric respiratory tract disease, a bivalent vaccine whose attenuation phenotype is based on the extensive host range sequence differences of BPIV3.

L76 ANSWER 3 OF 37 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 97321773 MEDLINE
DOCUMENT NUMBER: 97321773 PubMed ID: 9178475
TITLE: The bovine parainfluenza virus type-3 (**BPIV**-3) hemagglutinin/neuraminidase glycoprotein expressed in baculovirus protects calves against experimental **BPIV**-3 challenge.
COMMENT: Erratum in: Vaccine 1997 Aug;15(11):1288
AUTHOR: Haanes E J; Guimond P; Wardley R
CORPORATE SOURCE: Pharmacia & Upjohn Inc., Kalamazoo, MI 49001, USA.
SOURCE: VACCINE, (1997 Apr-May) 15 (6-7) 730-8.
Journal code: 8406899. ISSN: 0264-410X.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199707
ENTRY DATE: Entered STN: 19970812
Last Updated on STN: 19990129
Entered Medline: 19970731

AB Despite the availability of numerous vaccine schedules, "shipping fever", an acute bronchopneumonia brought on in part by a complex of bovine respiratory viruses, remains a major source of economic loss in the beef and dairy industries. We are exploring new strategies of bovine vaccine design which we hope may provide more effective and more cost-efficient control of these pathogens. In this report, we examined the possible use of subunit vaccines, using as an example the hemagglutinin/neuraminidase (HN) protein of bovine parainfluenza virus type-3 (BPIV-3) expressed in the baculovirus expression system. We showed that the protein was expressed at high levels, and was modified to a similar, but not identical size as the native HN protein expressed from BPIV-3 infected bovine cells. We further demonstrated antigenicity and biological activity of the expressed HN protein. Finally, we vaccinated colostrum deprived sera-negative calves with the baculo HN recombinant protein and challenged with BPIV-3. Vaccination induced excellent serum neutralizing antibody responses, and surprisingly, good mucosal antibody responses, even though the vaccine was administered parenterally. The vaccinated animals were well protected against challenge.

L76 ANSWER 4 OF 37 MEDLINE
ACCESSION NUMBER: 2001556233 MEDLINE
DOCUMENT NUMBER: 21488919 PubMed ID: 11601905
TITLE: A single amino acid **substitution** in the viral polymerase creates a temperature-sensitive and attenuated recombinant bovine parainfluenza virus type 3.
AUTHOR: Haller A A; MacPhail M; Mitiku M; Tang R S
CORPORATE SOURCE: Aviron, 297 North Bernardo Avenue, Mountain View, California 94043, USA.. ahaller@aviron.com
CONTRACT NUMBER: 1 R43 AI 46168-01 (NIAID)
SOURCE: VIROLOGY, (2001 Sep 30) 288 (2) 342-50.
Journal code: 0110674. ISSN: 0042-6822.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011017
Last Updated on STN: 20020122
Entered Medline: 20011204

AB Bovine parainfluenza virus type 3 (bPIV3) is under development as a live virus vaccine vector. The RNA genome of a recombinant bPIV3 harbored four nucleotide changes, one of which resulted in a mutation of the viral polymerase (A. A. Haller et al., 2000, J. Virol. 74, 11626-11635). The contribution of this conservative amino acid substitution (I1103V) in the polymerase to the temperature-sensitive and attenuation phenotypes of r-bPIV3 was investigated by creating a new virus, r-bPIV3(I), that expressed the wild-type polymerase. r-bPIV3(I) was not temperature-sensitive for growth in vitro and the replication of r-bPIV3(I) was no longer restricted in hamsters. The effect of the amino acid substitution in the polymerase was also studied in a chimeric bovine/human PIV3, a virus that displayed temperature-sensitive and attenuated phenotypes (A. A. Haller et al., 2000, J. Virol. 74, 11626-11635). It was not clear whether these defects were due to the impaired polymerase or the replacement of the bPIV3 surface glycoproteins with those of hPIV3. The results showed that the altered polymerase was indeed responsible for the temperature-sensitive phenotype of bovine/human PIV3 but did not appear to play a role in the attenuation phenotype.

L76 ANSWER 5 OF 37 MEDLINE
ACCESSION NUMBER: 1999281904 MEDLINE
DOCUMENT NUMBER: 99281904 PubMed ID: 10355773
TITLE: Mucosal immunization of calves with **recombinant** **bovine** adenovirus-3: induction of protective immunity to bovine herpesvirus-1.
AUTHOR: Zakhartchouk A N; Pyne C; Mutwiri G K; Papp Z; Baca-Estrada M E; Griebel P; Babiuk L A; Tikoo S K
CORPORATE SOURCE: Veterinary Infectious Disease Organization, University of Saskatchewan, Saskatoon, Canada.
SOURCE: JOURNAL OF GENERAL VIROLOGY, (1999 May) 80 (Pt 5) 1263-9. Journal code: 0077340. ISSN: 0022-1317.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199906
ENTRY DATE: Entered STN: 19990628
Last Updated on STN: 19990628
Entered Medline: 19990615

AB To determine the potential of replication-competent (E3-deleted) bovine adenovirus-3 (BAV-3) as a delivery system for vaccine antigens in calves, we evaluated the ability of recombinant BAV-3 expressing different forms of of bovine herpesvirus-1 (BHV-1) glycoprotein gD to protect against BHV-1 infection in calves that had pre-existing BAV-3 specific antibodies. Three- to four-month-old calves, vaccinated intranasally with recombinant BAV-3 expressing full-length gD (BAV3.E3gD) or a truncated version of gD (gDt) (BAV3.E3gDt), or with E3-deleted BAV-3 (BAV3.E3d; control), were challenged with BHV-1 strain 108. Vaccination with BAV3.E3gD or BAV3.E3gDt induced gD-specific antibody responses in serum and nasal secretions, and primed calves for gD-specific lymphoproliferative responses. In addition, all calves developed complement-independent neutralizing antibodies against BHV-1. Protection against viral challenge was observed in calves

vaccinated with recombinant BAV3.E3gD or BAV3.E3gDt as shown by a significant reduction in body temperature and clinical disease, and a partial reduction in the amount and duration of virus excretion in nasal secretions. These results indicate that replication-competent BAV-3-based vectors can induce protective immune responses in calves (the natural host) that have pre-existing BAV-3-specific antibodies.

L76 ANSWER 6 OF 37 MEDLINE
ACCESSION NUMBER: 1998343734 MEDLINE
DOCUMENT NUMBER: 98343734 PubMed ID: 9680140
TITLE: Resistance to bovine respiratory syncytial virus (**BRSV**) induced in calves by a **recombinant bovine** herpesvirus-1 expressing the attachment glycoprotein of **BRSV**.
AUTHOR: Taylor G; Rijsewijk F A; Thomas L H; Wyld S G; Gaddum R M; Cook R S; Morrison W I; Hensen E; van Oirschot J T; Keil G
CORPORATE SOURCE: Institute for Animal Health, Newbury, Berkshire, UK.. Geraldine.Taylor@bbsrc.ac.uk
SOURCE: JOURNAL OF GENERAL VIROLOGY, (1998 Jul) 79 (Pt 7) 1759-67. Journal code: 0077340. ISSN: 0022-1317.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199808
ENTRY DATE: Entered STN: 19980828
Last Updated on STN: 19980828
Entered Medline: 19980814

AB The ability of a bovine herpesvirus-1 (BHV-1) recombinant expressing the G protein of bovine respiratory syncytial virus (BRSV) to protect against BRSV infection was examined in calves. A synthetic G gene was inserted behind the gE promoter of BHV-1 to give a gE-negative, BHV-1/G recombinant. Gnotobiotic calves, vaccinated intranasally and intratracheally with BHV-1/G were challenged 6 weeks later with the Snook strain of BRSV. As controls, calves were vaccinated with a gE-negative mutant of BHV-1 which contains a frame-shift (BHV-1/gEfs). Whereas infection with BHV-1/gEfs induced only mild clinical signs, infection with BHV-1/G resulted in more severe clinical disease and higher titres of BHV-1/G were isolated from the lungs when compared with BHV-1/gEfs. Thus, expression of the G protein of BRSV increased the virulence of BHV-1 for calves. Vaccination with BHV-1/G induced BRSV-specific antibody in serum and respiratory secretions. However, only one calf developed low levels of BRSV complement-dependent neutralizing antibody. Although BHV-1/G primed calves for BRSV-specific lymphocyte proliferative responses, there was no evidence for priming of BRSV-specific cytotoxic T cells. After challenge with BRSV, there was a significant reduction in nasopharyngeal excretion of BRSV in BHV-1/G-vaccinated calves compared with controls and BRSV was isolated from the lung of only one of five vaccinated calves compared with all four control animals. In addition, the extent of gross pneumonic lesions 7 days after BRSV challenge was significantly reduced in calves vaccinated with BHV-1/G compared with controls given BHV-1/gEfs.

L76 ANSWER 7 OF 37 MEDLINE
ACCESSION NUMBER: 1999262531 MEDLINE
DOCUMENT NUMBER: 99262531 PubMed ID: 10325535
TITLE: Functional characterization of bovine parainfluenza virus type 3 hemagglutinin-neuraminidase and fusion proteins expressed by adenovirus recombinants.
AUTHOR: Mittal S K; Tikoo S K; van den Hurk J V; Breker-Klassen M M; Yoo D; Babiuk L A
CORPORATE SOURCE: Department of Veterinary Pathobiology, School of Veterinary

Medicine, Purdue University, West Lafayette, IN 47907-1243, USA.. skmittal@vet.purdue.edu
SOURCE: INTERVIROLOGY, (1998) 41 (6) 253-60.
Journal code: 0364265. ISSN: 0300-5526.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199909
ENTRY DATE: Entered STN: 19990913
Last Updated on STN: 19990913
Entered Medline: 19990902

AB We constructed replication-competent human adenovirus type 5 (HAd5) recombinants (HAd5-HN and HAd5-F) containing the bovine parainfluenza virus type 3 (BPIV3) hemagglutinin-neuraminidase (HN) or fusion (F) gene under the control of the simian virus 40 (SV40) regulatory sequences. These genes were inserted in the early region 3 (E3) of the HAd5 genome in the E3 parallel orientation. Expression of HN or F in HAd5-HN- or HAd5-F-infected cell extracts, respectively, was observed by immunoprecipitation using a BPIV3-specific polyclonal antiserum. Our results suggest that HN and F expressed by HAd5 recombinants were functionally similar to the native HN and F expressed in BPIV3-infected cells.

L76 ANSWER 8 OF 37 MEDLINE
ACCESSION NUMBER: 96107032 MEDLINE
DOCUMENT NUMBER: 96107032 PubMed ID: 8545954
TITLE: Genetically **altered** herpesviruses as vaccines.
AUTHOR: Young P L; Smith G A
CORPORATE SOURCE: Queensland Agricultural Biotechnology Centre, Gehrmann Laboratories, University of Queensland, St Lucia, Australia.
SOURCE: VETERINARY MICROBIOLOGY, (1995 Sep) 46 (1-3) 175-9. Ref: 20
Journal code: 7705469. ISSN: 0378-1135.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199602
ENTRY DATE: Entered STN: 19960227
Last Updated on STN: 19960227
Entered Medline: 19960213

AB Herpesviruses are a common and important cause of disease in most domestic animals. While many virus diseases have been successfully controlled by conventional vaccines, genetically modified vaccines offer distinct advantages. They are less virulent, less likely to result in latency and they include genotypic and phenotypic markers which allow differentiation of vaccine virus from wild-type virus and serological differentiation of vaccinated animals from infected animals. These benefits are particularly useful in eradication campaigns for herpesvirus diseases such as Aujeszky's disease and infectious bovine rhinotracheitis. Neither conventional nor genetically modified vaccines prevent super-infection. This is a major problem for diseases such as Marek's disease where virulent virus continues to be excreted from vaccinated animals, thus contaminating the environment and making control more difficult. To prevent infection, new strategies will need to be developed such as transgenic animals which are innately resistant.

L76 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
ACCESSION NUMBER: 2002:712902 CAPLUS
DOCUMENT NUMBER: 137:243072
TITLE: Recombinant and mutant **bovine** **adenoviruse** vectors and uses for vaccination and gene therapy
INVENTOR(S): Chiang, Christina H.; Cochran, Mark D.
PATENT ASSIGNEE(S): Schering-Plough Veterinary Corporation, USA
SOURCE: U.S., 33 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6451319	B1	20020917	US 2000-545481	20000407

PRIORITY APPLN. INFO.: US 1999-128766P P 19990409

AB The present invention provides recombinant and mutant **bovine** adenoviruse vectors and their uses for vaccination and gene therapy. Specifically, the present invention provides mutant and recombinant **bovine** adenoviruses having a deletion and/or insertion of DNA in the early gene region 4 (E4). In another embodiment, the present invention provides mutant and recombinant **bovine** adenovirus 1 viruses having a deletion and/or insertion of DNA in the early gene region 3 (E3). The invention also discloses methods for prepg. the recombinant **bovine** adenovirus vectors. The present invention also contemplates the use of the viral vectors for vaccination, gene therapy or other applications as suitable.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 10 OF 37 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
ACCESSION NUMBER: 2001:713077 CAPLUS
DOCUMENT NUMBER: 135:270010
TITLE: Recombinant **parainfluenza** virus expression systems and vaccines
INVENTOR(S): Haller, Aurelia; Coelingh, Kathleen L.
PATENT ASSIGNEE(S): Aviron, USA
SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001070032	A1	20010927	WO 2001-US9091	20010321
WO 2001070032	C2	20021219		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1267626	A1	20030102	EP 2001-922535	20010321

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2000-531375 A 20000321
WO 2001-US9091 W 20010321

AB The present invention relates to recombinant **bovine parainfluenza virus 3** (bPIV) cDNA or RNA which may be used to express heterologous gene products in appropriate host cell systems and/or to rescue neg. strand RNA recombinant viruses that express, package, and/or present the heterologous gene product. The heterologous sequences encoding F and HN glycoproteins or G protein of human parainfluenza virus, influenza virus or respiratory syncytial virus interchange with those of bPIV3 to make chimeric **bovine** PIV virus. In addn. to heterologous sequence, the polymerase (L) gene of **bovine parainfluenza virus 3** also has a mutation at position 1103, resulting in a temp.-sensitive phenotype. The chimeric **bovine** PIV virus shows attenuated phenotype and elicit strong protective response when administered in vivo. The chimeric viruses and expression products may advantageously be used in vaccine formulations including vaccines against a broad range of pathogens and antigens.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 11 OF 37 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 5
ACCESSION NUMBER: 2000:742267 CAPLUS
DOCUMENT NUMBER: 133:292011
TITLE: Recombinant and mutant adenoviruses derived of bovine adenovirus type 1 for gene therapy and vaccine delivery
INVENTOR(S): Chiang, Christina H.; Cochran, Mark D.
PATENT ASSIGNEE(S): Schering-Plough Ltd., Switz.
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000061773	A1	20001019	WO 2000-US9459	20000407
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MA, MD, MG, MK, MN, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1169464	A1	20020109	EP 2000-921951	20000407
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000009666	A	20020205	BR 2000-9666	20000407
JP 2002541815	T2	20021210	JP 2000-611696	20000407

PRIORITY APPLN. INFO.: US 1999-289930 A2 19990409
WO 2000-US9459 W 20000407

AB The present invention provides a series of viral vectors based on the bovine adenoviruses. In one embodiment, the present invention provides mutant and recombinant bovine adenoviruses having a deletion and/or insertion of DNA in the early gene region 4 (E4). In another embodiment, the present invention provides mutant and recombinant bovine adenovirus 1

viruses having a deletion and/or insertion of DNA in the early gene region 3 (E3). The present invention also contemplates the use of the viral vectors for vaccination, gene therapy or other applications as suitable.
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 12 OF 37 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 6
ACCESSION NUMBER: 2001:205100 CAPLUS
DOCUMENT NUMBER: 134:352010
TITLE: Expression of the surface glycoproteins of human parainfluenza virus type 3 by bovine parainfluenza virus type 3, a novel attenuated virus vaccine vector
AUTHOR(S): Haller, Aurelia A.; Miller, Tessa; Mitiku, Misrach; Coelingh, Kathleen
CORPORATE SOURCE: Aviron, Mountain View, CA, 94043, USA
SOURCE: Journal of Virology (2000), 74(24), 11626-11635
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Bovine parainfluenza virus type 3 (bPIV3) is being evaluated as an intranasal vaccine for protection against human PIV3 (hPIV3). In young infants, the bPIV3 vaccine appears to be infectious, attenuated, immunogenic, and genetically stable, which are desirable characteristics for an RNA virus vector. To test the potential of the bPIV3 vaccine strain as a vector, an infectious DNA clone of bPIV3 was assembled and recombinant bPIV3 (r-bPIV3) was rescued. R-bPIV3 displayed a temp.-sensitive phenotype for growth in tissue culture at 39.degree. and was attenuated in the lungs of Syrian golden hamsters. In order to test whether r-bPIV3 could serve as a vector, the fusion and hemagglutinin-neuraminidase genes of bPIV3 were replaced with those of hPIV3. The resulting bovine/human PIV3 was temp. sensitive for growth in Vero cells at 37.degree.. The replication of bovine/human PIV3 was also restricted in the lungs of hamsters, albeit not as severely as was obsd. for r-bPIV3. Despite the attenuation phenotypes obsd. for r-bPIV3 and bovine/human PIV3, both of these viruses protected hamsters completely upon challenge with hPIV3. In summary, bPIV3 was shown to function as a virus vector that may be esp. suitable for vaccination of infants and children against PIV3 and other viruses.
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 13 OF 37 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 7
ACCESSION NUMBER: 2000:678530 CAPLUS
DOCUMENT NUMBER: 133:333826
TITLE: Bovine parainfluenza virus type 3 (BPIV3) fusion and hemagglutinin-neuraminidase glycoproteins make an important contribution to the restricted replication of BPIV3 in primates
AUTHOR(S): Schmidt, Alexander C.; McAuliffe, Josephine M.; Huang, Anne; Surman, Sonja R.; Bailly, Jane E.; Elkins, William R.; Collins, Peter L.; Murphy, Brian R.; Skiadopoulos, Mario H.
CORPORATE SOURCE: Laboratory of Infectious Disease, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, 20892, USA
SOURCE: Journal of Virology (2000), 74(19), 8922-8929
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This study examines the contribution of the fusion (F) and hemagglutinin-neuraminidase (HN) glycoprotein genes of bovine parainfluenza virus type 3 (BPIV3) to its restricted replication in the respiratory tract of nonhuman primates. A chimeric recombinant human parainfluenza type 3 virus (HPIV3) contg. BPIV3 F and HN glycoprotein genes in place of its own and the reciprocal recombinant consisting of BPIV3 bearing the HPIV3 F and HN genes (rBPIV3-FHHNH) were generated to assess the effect of glycoprotein substitution on replication of HPIV3 and BPIV3 in the upper and lower respiratory tract of rhesus monkeys. The chimeric viruses were readily recovered and replicated in simian LLC-MK2 cells to a level comparable to that of their parental viruses, suggesting that the heterologous glycoproteins were compatible with the PIV3 internal proteins. HPIV3 bearing the BPIV3 F and HN genes was restricted in replication in rhesus monkeys to a level similar to that of its BPIV3 parent virus, indicating that the glycoprotein genes of BPIV3 are major determinants of its host range restriction of replication in rhesus monkeys. RBPIV3-FHHNH replicated in rhesus monkeys to a level intermediate between that of HPIV3 and BPIV3. This observation indicates that the F and HN genes make a significant contribution to the overall attenuation of BPIV3 for rhesus monkeys. Furthermore, it shows that BPIV3 sequences outside the F and HN region also contribute to the attenuation phenotype in primates, a finding consistent with the previous demonstration that the nucleoprotein coding sequence of BPIV3 is a determinant of its attenuation for primates. Despite its restricted replication in the respiratory tract of rhesus monkeys, rBPIV3-FHHNH conferred a level of protection against challenge with HPIV3 that was indistinguishable from that induced by previous infection with wild-type HPIV3. The usefulness of rBPIV3-FHHNH as a vaccine candidate against HPIV3 and as a vector for other viral antigens is discussed.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 14 OF 37 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 8
ACCESSION NUMBER: 1999:438416 CAPLUS
DOCUMENT NUMBER: 131:256019
TITLE: Immune responses and protection induced by DNA vaccines encoding **bovine** parainfluenza virus type 3 glycoproteins
AUTHOR(S): Van Drunen Littel-Van den Hurk, S.; Braun, R. P.; Karvonen, B. C.; King, T.; Yoo, D.; Babiuk, L. A.
CORPORATE SOURCE: Veterinary Infectious Disease Organization, University of Saskatchewan, Saskatoon, SK, S7N 5E3, Can.
SOURCE: Virology (1999), 260(1), 35-46
CODEN: VIRLAX; ISSN: 0042-6822
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This study was designed to assess the parameters influencing the magnitude and type of immune responses generated to plasmids encoding the hemagglutinin/neuraminidase (HN) and fusion (**F**) **proteins** of **bovine** parainfluenzavirus type 3 (BPIV3). Mice immunized with plasmids expressing HN or F under control of the Rous sarcoma virus long terminal repeat promoter were primed, but they did not develop measurable immune responses. In contrast, strong humoral and cellular immune responses were induced with constructs contg. the human cytomegalovirus immediate-early promoter and intron A. After immunization with both HN- and F-encoding plasmids, enhanced responses were obsd. Anal. of in vitro protein synthesis confirmed that the presence of the intron is crucial for the expression of the BPIV3 HN gene. Plasmid encoding HN induced significantly higher serum antibody titers by intradermal injection than by i.m. delivery, whereas antigen-specific T

cell proliferation was stronger in i.m. injected mice. Both the isotype ratios and the cytokine profiles indicated a Th1-type response after i.m. immunization and a mixed to Th2-type response in intradermally immunized mice. A plasmid encoding a truncated, secreted form of HN induced a Th2-type immune response, regardless of the route of delivery. In cotton rats, HN- and F-encoding plasmids conferred protection from BPIV3 challenge. (c) 1999 Academic Press.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 15 OF 37 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 10
ACCESSION NUMBER: 1996:452466 CAPLUS
DOCUMENT NUMBER: 125:107069
TITLE: Manufacture of the **bovine parainfluenza** virus type 3 hemagglutinin/neuraminidase (HN) glycoprotein in a baculovirus or herpesvirus system
INVENTOR(S): Haanes, Elizabeth J.; Wardley, Richard C.
PATENT ASSIGNEE(S): Upjohn Co., USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9616184	A1	19960530	WO 1995-US13482	19951108
W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2204252	AA	19960530	CA 1995-2204252	19951108
AU 9645005	A1	19960617	AU 1996-45005	19951108
AU 706454	B2	19990617		
EP 793728	A1	19970910	EP 1995-943566	19951108
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10509593	T2	19980922	JP 1995-516849	19951108

PRIORITY APPLN. INFO.: US 1994-342198 19941118
WO 1995-US13482 19951108

AB The hemagglutinin/neuraminidase of **bovine parainfluenza virus 3** is manufd. using a **bovine** herpesvirus 1 (BHV-1) or baculovirus expression system for use in new vaccines to combat respiratory diseases in **cattle**. A replication-competent, non-pathogenic BHV-1 carrying the HN gene, for example integrated into the tk gene, may be used in a bivalent vaccine against both pathogens. Construction of expression vectors is demonstrated. Calves vaccinated with BHV-1 or baculovirus expressing the HN gene developed high levels of neutralizing antibodies to the parainfluenza virus. Upon challenge with the virus, the vaccinated calves showed less virus shedding and for a shorter period than control animals.

L76 ANSWER 16 OF 37 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:31493 CAPLUS
DOCUMENT NUMBER: 136:101087
TITLE: Attenuated human-**bovine chimeric parainfluenza** virus (**PIV**) vaccines

INVENTOR(S): Skiadopoulos, Mario H.; Collins, Peter L.; Murphy, Brian R.; Schmidt, Alexander C.
PATENT ASSIGNEE(S): The Government of the United States of America, as Represented by the Department of Health and Human Services, USA
SOURCE: PCT Int. Appl., 154 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002002605	A2	20020110	WO 2001-US21527	20010705
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 2001071909	A5	20020114	AU 2001-71909	20010705
PRIORITY APPLN. INFO.:			US 2000-215809P	P 20000705
			WO 2001-US21527	W 20010705

AB Chimeric human-**bovine** parainfluenza viruses (PIVs) are infectious and attenuated in humans and other mammals and useful individually or in combination in vaccine formulations for eliciting an anti-PIV immune response. Also provided are isolated polynucleotide mols. and vectors incorporating a chimeric PIV genome or antigenome which includes a partial or complete human or **bovine** PIV "background" genome or antigenome combined or integrated with one or more heterologous gene(s) or genome segment(s) of a different PIV. Chimeric human-**bovine** PIV of the invention include a partial or complete "background" PIV genome or antigenome derived from or patterned after a human or **bovine** PIV virus combined with one or more heterologous gene(s) or genome segment(s) of a different PIV virus to form the human-**bovine** chimeric PIV genome or antigenome. In certain aspects of the invention, chimeric PIV incorporate a partial or complete human PIV background genome or antigenome combined with one or more heterologous gene(s) or genome segment(s) from a **bovine** PIV, whereby the resultant chimeric virus is attenuated by virtue of host-range restriction. In alternate embodiments, human-**bovine** chimeric PIV incorporate a partial or complete **bovine** PIV background genome or antigenome combined with one or more heterologous gene(s) or genome segment(s) from a human PIV gene that encode a human PIV immunogenic protein, protein domain or epitope, for example encoded by PIV HN and/or F glycoprotein gene(s) or genome segment(s). Human-**bovine** chimeric PIV of the invention are also useful as vectors for developing vaccines against other pathogens. A variety of addnl. mutations and nucleotide modifications are provided within the human-**bovine** chimeric PIV of the invention to yield desired phenotypic and structural effects.

L76 ANSWER 17 OF 37 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:814760 CAPLUS
DOCUMENT NUMBER: 137:336720
TITLE: Recombinant **parainfluenza** viruses (**PIVs**) as vectors to protect against infection

and disease
INVENTOR(S): Murphy, Brian R.; Collins, Peter L.; Schmidt, Alexander C.; Durbin, Anna P.; Skiadopoulos, Mario H.; Tao, Tao
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 199 pp., Cont.-in-part of U.S. Ser. No. 83,793.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002155581	A1	20021024	US 2000-733692	20001208

PRIORITY APPLN. INFO.:

US 1997-47575P	P	19970523
US 1997-59385P	P	19970919
US 1998-83793	A2	19980522
US 1999-170195P	P	19991210

AB Chimeric parainfluenza viruses (PIVs) are provided that incorporate a PIV vector genome or anti-genome and one or more antigenic determinant(s) of a heterologous PIV or non-PIV pathogen. These chimeric viruses are infectious and attenuated in humans and other mammals and are useful in vaccines. In one example, human parainfluenza virus 3 was constructed to express the hemagglutinin of measles virus. In preferred aspects of the invention, chimeric PIV incorporate a partial or complete human, **bovine**, or human-**bovine** chimeric, PIV vector genome or anti-genome combined with one or more heterologous gene(s) or genome segment(s) from a heterologous PIV or non-PIV pathogen, wherein the chimeric virus is attenuated for use as a vaccine agent by any of a variety of mutations and nucleotide modifications introduced into the chimeric genome or anti-genome.

L76 ANSWER 18 OF 37 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:711357 CAPLUS
DOCUMENT NUMBER: 137:231358
TITLE: **Bovine** polynucleotide vaccines and liquid jet intradermal administration apparatus
INVENTOR(S): Rijsewijk, Franciscus Antonius Maria; Schrijver, Remco Siebren; Van Oirschot, Johannes Theodorus
PATENT ASSIGNEE(S): Merial, Fr.; Id-Dlo Institute of Animal Science and Health
SOURCE: U.S., 10 pp., Cont.-in-part of WO 98 3,196.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6451770	B1	20020917	US 1999-232469	19990115
FR 2751228	A1	19980123	FR 1996-9402	19960719
FR 2751228	B1	19981120		
WO 9803196	A1	19980129	WO 1997-FR1322	19970716

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 2002137716 A1 20020926 US 2002-77489 20020215

PRIORITY APPLN. INFO.: FR 1996-9402 A 19960719
WO 1997-FR1322 A2 19970716
US 1999-232469 A3 19990115

AB Disclosed and claimed is the use of a liq. jet intradermal administration app. that administers a compn.: without a needle; and in the epidermis, dermis and/or hypodermis, such as a Pigjet app., for administering **bovine** vaccines or immunogenic compns., esp. **bovine** plasmid vaccines or immunogenic compns. Accordingly, the invention involves **bovine** immunogenic or vaccine compns. in such an app., and methods for vaccinating **bovines** or for inducing an immunogenic response in **bovines** employing such an app., as well as the app. contg. **bovine** immunogenic or vaccine compns. The **bovine** vaccines comprise plasmids encoding **bovine** respiratory syncytial virus G proteins or infectious **bovine** rhinotracheitis virus gB proteins operatively linked to cytomegalovirus IE promoter.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 19 OF 37 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:50836 CAPLUS
DOCUMENT NUMBER: 134:114833
TITLE: Production of attenuated, human-**bovine** **chimeric** respiratory syncytial virus vaccines
INVENTOR(S): Buchholz, Ursula; Collins, Peter L.; Murphy, Brian R.; Whitehead, Stephen S.; Krempl, Christine D.
PATENT ASSIGNEE(S): United States Dept. of Health and Human Services, USA
SOURCE: PCT Int. Appl., 148 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001004335	A2	20010118	WO 2000-US17755	20000624
WO 2001004335	A3	20021219		
WO 2001004335	C1	20030206		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2000056415	A5	20010130	AU 2000-56415	20000624
BR 2000013195	A	20020723	BR 2000-13195	20000624
EP 1287152	A2	20030305	EP 2000-941756	20000624

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY

PRIORITY APPLN. INFO.: US 1999-143132P P 19990709
WO 2000-US17755 W 20000624

AB Chimeric human-**bovine** respiratory syncytial virus (RSV) are infectious and attenuated in humans and other mammals and useful in vaccine formulations for eliciting an anti-RSV immune response. Also

provided are isolated polynucleotide mols. and vectors incorporating a chimeric RSV genome or antigenome which includes a partial or complete human or **bovine** RSV "background" genome or antigenome combined or integrated with one or more heterologous gene(s) or genome segment(s) of a different RSV strain. Chimeric human-**bovine** RSV of the invention include a partial or complete "background" RSV genome or antigenome derived from or patterned after a human or **bovine** RSV strain or subgroup virus combined with one or more heterologous gene(s) or genome segment(s) of a different RSV strain or subgroup virus to form the human-**bovine** chimeric RSV genome or antigenome. In preferred aspects of the invention, chimeric RSV incorporate a partial or complete **bovine** RSV background genome or antigenome combined with one or more heterologous gene(s) or genome segment(s) from a human RSV. Genes of interest include any of the NS1, NS2, N, P, M, SH, M2(ORF1), M2(ORF2), L, F or G genes or a genome segment including a protein or portion thereof. A variety of addnl. mutations and nucleotide modifications are provided within the human-**bovine** chimeric RSV of the invention to yield desired phenotypic and structural effects.

L76 ANSWER 20 OF 37 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:50823 CAPLUS
DOCUMENT NUMBER: 134:114831
TITLE: Attenuated human-**bovine chimeric parainfluenza** virus vaccines
INVENTOR(S): Schmidt, Alexander C.; Skiadopoulos, Mario H.; Collins, Peter L.; Murphy, Brian R.; Bailly, Jane E.; Durbin, Anna P.
PATENT ASSIGNEE(S): United States Department of Health and Human Services, USA
SOURCE: PCT Int. Appl., 150 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001004320	A1	20010118	WO 2000-US17066	20000616
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000013190	A	20020716	BR 2000-13190	20000615
AU 2000056303	A5	20010130	AU 2000-56303	20000616
EP 1194564	A1	20020410	EP 2000-941614	20000616
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2003504064	T2	20030204	JP 2001-509524	20000616

PRIORITY APPLN. INFO.: US 1999-143134P P 19990709
WO 2000-US17066 W 20000616

AB Chimeric human-**bovine** parainfluenza viruses (PIVs) are infectious and attenuated in humans and other mammals and useful individually or in combination in vaccine formulations for eliciting an anti-PIV immune response. Also provided are isolated polynucleotide mols. and vectors incorporating a chimeric PIV genome or antigenome which

includes a partial or complete human or **bovine** PIV "background" genome or antigenome combined or integrated with one or more heterologous gene(s) or genome segment(s) of a different PIV. Chimeric human-**bovine** PIV of the invention include a partial or complete "background" PIV genome or antigenome derived from or patterned after a human or **bovine** PIV virus combined with one or more heterologous gene(s) or genome segment(s) of a different PIV virus to form the human-**bovine** chimeric PIV genome or antigenome. In certain aspects of the invention, chimeric PIV incorporate a partial or complete human PIV background genome or antigenome combined with one or more heterologous gene(s) or genome segment(s) from a **bovine** PIV, whereby the resultant chimeric virus is attenuated by virtue of host-range restriction. In alternate embodiments, human-**bovine** chimeric PIV incorporate a partial or complete **bovine** PIV background genome or antigenome combined with one or more heterologous gene(s) or genome segment(s) from a human PIV gene that encode a human PIV immunogenic protein, protein domain or epitope, for example encoded by PIV HN and/or F glycoprotein gene(s) or genome segment(s). Human-**bovine** chimeric PIV of the invention are also useful as vectors for developing vaccines against other pathogens. A variety of addnl. mutations and nucleotide modifications are provided within the human-**bovine** chimeric PIV of the invention to yield desired phenotypic and structural effects.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 21 OF 37 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:553283 CAPLUS
DOCUMENT NUMBER: 133:145944
TITLE: Construction and characterization of a recombinant bovine Herpesvirus vector expressing bovine viral diarrhea virus glycoprotein E2 gene and its use as vaccines
INVENTOR(S): Gunther, Michael
PATENT ASSIGNEE(S): Akzo Nobel N. V., Neth.
SOURCE: Eur. Pat. Appl., 38 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1026252	A1	20000809	EP 2000-200281	20000127
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: EP 1999-200304 A 19990202

AB The present invention relates to a recombinant live attenuated bovine Herpesvirus 1 (BHV-1) vector expressing glycoprotein E2 gene of bovine viral diarrhea virus (BVDV). The synthetic gene of BVDV E2 protein and the pestivirus signal peptide (CSFV strain Alfort) fusion protein under the control of various promoters is inserted into BHV vector. The resulting recombinant BHV-1 virions expresses BVDV E2 glycoprotein and demonstrates comparable infection to MDBK cells with the parental virus. These live attenuated BHV can be used for the prepn. of BVDV vaccines and diagnostic tools.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:659270 CAPLUS
DOCUMENT NUMBER: 131:298650
TITLE: Polymer adjuvants for use with vector vaccines
INVENTOR(S): Audonnet, Jean-christophe Francis; Minke, Jules Maarten
PATENT ASSIGNEE(S): Merial, Fr.
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9951269	A1	19991014	WO 1999-FR666	19990322
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
FR 2776928	A1	19991008	FR 1998-4409	19980403
FR 2776928	B1	20000623		
CA 2327389	AA	19991014	CA 1999-2327389	19990322
AU 9928448	A1	19991025	AU 1999-28448	19990322
AU 744964	B2	20020307		
BR 9909342	A	20001212	BR 1999-9342	19990322
EP 1066055	A1	20010110	EP 1999-909069	19990322
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
JP 2002510651	T2	20020409	JP 2000-542039	19990322

PRIORITY APPLN. INFO.: FR 1998-4409 A 19980403
WO 1999-FR666 W 19990322

AB Polymer adjuvants that increase the efficacy of vector vaccines carrying an expression cassette for an antigen gene of a pathogen are described. The polymers are acrylic or methacrylic polymers and the maleic anhydride copolymers and alkenyl deriv. The adjuvant compd. is preferably a carbomer or an EMA.RTM.. Construction of expression vectors for a no. viral antigen genes were constructed using the com. expression vector pVR1012 is described. Inoculation of horses, swine, **cattle**, and dogs with these vectors with Carbopol 974P as an adjuvant is demonstrated. Use of the adjuvant led to the appearance of antibody to the antigens.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:377692 CAPLUS
DOCUMENT NUMBER: 131:183595
TITLE: Functional characterization of bovine parainfluenza virus type 3 hemagglutinin-neuraminidase and fusion proteins expressed by adenovirus recombinants
AUTHOR(S): Mittal, Suresh K.; Tikoo, Suresh K.; Van den Hurk, J. V.; Breker-Klassen, Michelle M.; Yoo, Dongwan; Babiuk, Lorne A.
CORPORATE SOURCE: Department of Veterinary Pathobiology, School of Veterinary Medicine, Purdue University, West Lafayette, IN, 47907-1243, USA

SOURCE: Intervirology (1999), Volume Date 1998, 41(6), 253-260
CODEN: IVRYAK; ISSN: 0300-5526
PUBLISHER: S. Karger AG
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors constructed replication-competent human adenovirus type 5 (HAd5) recombinants (HAd5-HN and HAd5-F) contg. the bovine parainfluenza virus type 3 (BPIV3) hemagglutinin-neuraminidase (HN) or fusion (F) gene under the control of the simian virus 40 (SV40) regulatory sequences. These genes were inserted in the early region 3 (E3) of the HAd5 genome in the E3 parallel orientation. Expression of HN or F in HAd5-HN-or HAd5-F-infected cell exts., resp., was obsd. by immunopptn. using a BPIV3-specific polyclonal antiserum. The results suggest that HN and F expressed by HAd5 recombinants were functionally similar to the native HN and F expressed in BPIV3-infected cells.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 24 OF 37 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:87637 CAPLUS
DOCUMENT NUMBER: 128:166350
TITLE: **Polyvalent vector vaccines** against respiratory diseases of **cattle**
INVENTOR(S): Audonnet, Jean-christophe; Bouchardon, Annabelle; Baudu, Philippe; Riviere, Michel
PATENT ASSIGNEE(S): Merial, Fr.; Audonnet, Jean-Christophe; Bouchardon, Annabelle; Baudu, Philippe; Riviere, Michel
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9803200	A2	19980129	WO 1997-FR1325	19970716
WO 9803200	A3	19980226		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
FR 2751229	A1	19980123	FR 1996-9403	19960719
FR 2751229	B1	19981127		
CA 2260855	AA	19980129	CA 1997-2260855	19970716
AU 9737735	A1	19980210	AU 1997-37735	19970716
AU 734442	B2	20010614		
ZA 9706283	A	19990119	ZA 1997-6283	19970716
EP 912194	A2	19990506	EP 1997-934578	19970716
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, PT, IE, RO				
BR 9710506	A	19990817	BR 1997-10506	19970716
JP 2000516200	T2	20001205	JP 1997-535655	19970716
NZ 333751	A	20010330	NZ 1997-333751	19970716
US 6376473	B1	20020423	US 1999-232279	19990115
US 2002160018	A1	20021031	US 2002-85519	20020228

PRIORITY APPLN. INFO.:
FR 1996-9403 A 19960719
WO 1997-FR1325 W 19970716
US 1999-232279 A3 19990115

AB Polyavalent (at least trivalent) vector vaccines against **bovine** respiratory diseases are described. Expression vectors carrying expression cassettes for antigen genes are described. Plasmids may carry several genes for antigens of one pathogen. Pathogens are selected from **bovine** herpes virus, **bovine** respiratory syncytial virus, mucosal disease virus and parainfluenza virus type 3. Genes used include gB and gD of **bovine** herpes virus, F and G of **bovine** respiratory syncytial virus, E2, C + E1 + E2 and E1 + E2 of mucosal disease virus and HN and F of parainfluenza virus type 3. Construction of expression vectors using the cytomegalovirus immediate-early promoter is described.

L76 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:87633 CAPLUS
DOCUMENT NUMBER: 128:166346
TITLE: **Vector vaccines** against **cattle** viruses and their intradermal administration
INVENTOR(S): Rijsewijk, Franciscus Antonius Maria; Schrijver, Remco Siebren; Van Oirschot, Johannes Theodorus
PATENT ASSIGNEE(S): Merial, Fr.; Id-Dlo Institute of Animal Science and Health; Rijsewijk, Franciscus Antonius Maria; Schrijver, Remco Siebren; Van Oirschot, Johannes Theodorus
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9803196	A1	19980129	WO 1997-FR1322	19970716
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
FR 2751228	A1	19980123	FR 1996-9402	19960719
FR 2751228	B1	19981120		
CA 2261334	AA	19980129	CA 1997-2261334	19970716
AU 9737732	A1	19980210	AU 1997-37732	19970716
AU 722878	B2	20000810		
ZA 9706285	A	19990119	ZA 1997-6285	19970716
EP 918540	A1	19990602	EP 1997-934575	19970716
EP 918540	B1	20020925		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, PT, IE, RO				
BR 9710498	A	20000118	BR 1997-10498	19970716
NZ 333752	A	20000623	NZ 1997-333752	19970716
JP 2000515522	T2	20001121	JP 1998-506636	19970716
AT 224732	E	20021015	AT 1997-934575	19970716
US 6451770	B1	20020917	US 1999-232469	19990115
US 2002137716	A1	20020926	US 2002-77489	20020215

PRIORITY APPLN. INFO.:		
FR 1996-9402	A	19960719
WO 1997-FR1322	W	19970716
US 1999-232469	A3	19990115

AB Vector vaccines against **cattle** viruses that can be administered intradermally are described. The vaccine is a plasmid carrying an

expression cassette for a antigen gene of the virus. The vector can be delivered intradermally using a liq. jet delivery app. A synthetic gene for the G attachment protein of **bovine** respiratory syncytial virus was placed under control of a human cytomegalovirus promoter. Specific pathogen-free calves were injected with this expression construct, either intradermally or i.m. once a week for 6 wk. Intradermal administration led to the development of significant titers (40-80) at the third week. After six weeks, the animal were challenged intranasally with 1 mL of a 103.8 TCID50/mL suspension of the virus. Intradermally inoculated **cattle** did not develop any significant symptoms of infection.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 26 OF 37 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 90231723 EMBASE
DOCUMENT NUMBER: 1990231723
TITLE: Antigenic variation of human and **bovine parainfluenza** virus type 3 strains.
AUTHOR: Klippmark E.; Rydbeck R.; Shibuta H.; Norrby E.
CORPORATE SOURCE: Department of Virology, Karolinska Institute, School of Medicine, S-105 21 Stockholm, Sweden
SOURCE: Journal of General Virology, (1990) 71/7 (1577-1580). ISSN: 0022-1317 CODEN: JGVIAY
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 026 Immunology, Serology and Transplantation
047 Virology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Three human and six **bovine parainfluenza** virus type 3 (PIV3) strains were examined by the use of 60 monoclonal antibodies (MAbs). Fifty-three MAbs to the human C243 strain were directed against six, four, nine and seven epitopes of the haemagglutinin-neuraminidase (HN), fusion (F), nucleocapsid (N) and matrix proteins, respectively. Seven MAbs to the bovine strain were directed against three epitopes of the HN protein and three epitopes of the **F protein**. Each strain was characterized in ELISA and immunofluorescence tests with all MAbs and in a haemagglutination inhibition assay with the anti-HN MAbs. There were marked differences between human and bovine viruses, primarily in the HN protein where five epitopes differed. One epitope of the F and one of the N protein also differed. Bovine PIV3 was found to be a homogeneous subtype and distinct from human PIV3.

L76 ANSWER 27 OF 37 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 89205477 EMBASE
DOCUMENT NUMBER: 1989205477
TITLE: Syncytium formation by recombinant vaccinia viruses carrying **bovine parainfluenza** 3 virus envelope protein genes.
AUTHOR: Sakai Y.; Shibuta H.
CORPORATE SOURCE: Department of Viral Infection, Institute of Medical Science, University of Tokyo, Minato-ku, Tokyo 108, Japan
SOURCE: Journal of Virology, (1989) 63/9 (3661-3668). ISSN: 0022-538X CODEN: JOVIAM
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 029 Clinical Biochemistry
047 Virology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The highly syncytium-inducing M strain and the weakly syncytium-inducing SC strain of **bovine parainfluenza** 3 virus differ by a single amino acid substitution in each of the hemagglutinin-neuraminidase (HN) and membrane (M) proteins, while their fusion (**F**) **proteins** are identical (T. Shioda, S. Wakao, S. Suzu, and H. Shibuta, Virology 162: 388-396, 1988). We constructed recombinant vaccinia viruses which express separately the M virus HN (Vac-MHN), SC virus HN (Vac-SCHN), M virus M (Vac-MM), SC virus M (Vac-SCM), and common F (Vac-**F**) **proteins**. CV-1 cells were infected with the recombinants, singly or in combination, and implanted onto indicator MDBK cells for syncytium formation. Combinations of Vac-MHN plus Vac-F and Vac-SCHN plus Vac-F induced extensive and weak syncytium formation, respectively. Vac-F alone did not induce syncytium formation, and both Vac-MM and Vac-SCM had no effect on syncytium formation. These findings indicated that the syncytium formation by **bovine parainfluenza** 3 virus requires both the F and HN proteins and that the extensive syncytium formation by the M virus is due to the M virus HN protein. MSC, another weakly syncytium-inducing virus variant, newly isolated from the M virus, was identical to the M virus in the primary structure of the HN and M proteins but differed from the M virus by a single amino acid residue in the **F protein**. The combination of the recombinant vaccinia virus expressing the MSC virus **F protein** and Vac-MHN resulted in weak syncytium formation.

L76 ANSWER 28 OF 37 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2003:95860 BIOSIS
DOCUMENT NUMBER: PREV200300095860
TITLE: Determinants of the host range restriction of replication of **bovine parainfluenza** virus type 3 in rhesus monkeys are polygenic.
AUTHOR(S): Skiadopoulos, Mario H. (1); Schmidt, Alexander C.; Riggs, Jeffrey M.; Surman, Sonja R.; Elkins, William R.; St. Claire, Marisa; Collins, Peter L.; Murphy, Brian R.
CORPORATE SOURCE: (1) NIH, 50 South Dr., Building 50, Room 6511, MSC 8007, Bethesda, MD, 20892-8007, USA: mskiadopoulos@niaid.nih.gov USA
SOURCE: Journal of Virology, (January 2003, 2003) Vol. 77, No. 2, pp. 1141-1148. print.
ISSN: 0022-538X.
DOCUMENT TYPE: Article
LANGUAGE: English
AB The Kansas strain of **bovine parainfluenza** virus type 3 (BPIV3) is 100- to 1,000-fold restricted in replication in the respiratory tracts of nonhuman primates compared to human PIV3 (HPIV3), an important pathogen of infants and young children. BPIV3 is also restricted in replication in human infants and children, yet it is immunogenic and is currently being evaluated in clinical trials as a **vaccine** candidate to protect against illness caused by HPIV3. We have examined the genetic basis for the host range attenuation phenotype of BPIV3 by exchanging each open reading frame (ORF) of a recombinant wild-type HPIV3 with the analogous ORF from BPIV3, with the caveats that the multiple ORFs of the P gene were exchanged as a single unit and that the **HN** and F genes were exchanged as a single unit. Recombinant chimeric bovine-human PIV3s were recovered from cDNA, and the levels of viral replication in vitro and in the respiratory tract of rhesus monkeys were determined. Recombinant chimeric HPIV3s bearing the BPIV3 N or P ORF were highly attenuated in the upper and lower respiratory tracts of monkeys, whereas those bearing the BPIV3 M or L ORF or the F and **HN** genes were only moderately attenuated. This indicates that the genetic determinants of the host range restriction of replication of BPIV3 for

primates are polygenic, with the major determinants being the N and P ORFs. Monkeys immunized with these bovine-human chimeric viruses, including the more highly attenuated ones, developed higher levels of HPIV3 hemagglutination-inhibiting serum antibodies than did monkeys immunized with BPIV3 and were protected from challenge with wild-type HPIV3. Furthermore, host range determinants could be combined with attenuating point mutations to achieve an increased level of attenuation. Thus, chimeric recombinant bovine-human PIV3 viruses that manifest different levels of attenuation in rhesus monkeys are available for evaluation as **vaccine** candidates to protect infants from the severe lower respiratory tract disease caused by HPIV3.

L76 ANSWER 29 OF 37 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1996:379870 BIOSIS
DOCUMENT NUMBER: PREV199699102226
TITLE: Comparisons of the F and **HN** gene sequences of different strains of **bovine parainfluenza** virus type 3: Relationship to phenotype and pathogenicity.
AUTHOR(S): Breker-Klassen, Michelle M.; Yoo, Dongwan; Babiuk, Lorne A. (1)
CORPORATE SOURCE: (1) Vet. Infect. Dis. Organization, Univ. Saskatchewan, 120 Veterinary Road, Saskatoon, SK S7N 5E3 Canada
SOURCE: Canadian Journal of Veterinary Research, (1996) Vol. 60, No. 3, pp. 229-236.
ISSN: 0830-9000.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English; French
AB The genes for the F and **HN** glycoprotein of a pathogenic field isolate of **bovine parainfluenza** virus type 3 (BPIV3) were isolated, converted to cDNA, and sequenced using dideoxynucleotides. The resulting nucleotide sequences were converted to protein sequence and were compared to previously sequenced glycoprotein genes with amino acid differences in the glycoproteins of isolates expressing different phenotypes. The **HN** glycoprotein, involved in the attachment and release of the virus, and the F glycoprotein, involved in penetration and spread of the virus, have been shown to affect pathogenicity of the virus and are the immunodominant proteins of the virus. Both the F and **HN** proteins have been shown to be required for syncytium formation. Our results suggest that BPIV3 viruses that exhibit greater syncytium-inducing activity in vitro have greater pathogenicity in vivo. By determining which epitopes are involved in syncytium formation and comparing the sequences and enzymatic activities of different strains of virus, it may be possible to design subunit **vaccines** that protect against disease.

L76 ANSWER 30 OF 37 WPIDS (C) 2003 THOMSON DERWENT
ACCESSION NUMBER: 2002-001119 [01] WPIDS
DOC. NO. CPI: C2002-000544
TITLE: New mutant, attenuated pestivirus, useful in live **vaccines**, particularly against **bovine** viral diarrhea virus, lacks part of stem loops Ia or Ib.
DERWENT CLASS: B04 C06 D16
INVENTOR(S): BECHER, P; ORLICH, M; THIEL, H; BECHER, P P; ORLICH, M M; THIEL, H H J
PATENT ASSIGNEE(S): (ALKU) AKZO NOBEL NV; (BECH-I) BECHER P P; (ORLI-I) ORLICH M M; (THIE-I) THIEL H H J
COUNTRY COUNT: 30
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

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EP 1149901     A1 20011031 (200201)* EN   26
    R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
       RO SE SI TR
CA 2342305     A1 20011021 (200201)   EN
BR 2001001523 A  20011120 (200202)
US 2002086033 A1 20020704 (200247)
JP 2002325575 A  20021112 (200305)        45
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APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1149901	A1	EP 2001-201388	20010417
CA 2342305	A1	CA 2001-2342305	20010420
BR 2001001523	A	BR 2001-1523	20010419
US 2002086033	A1	US 2001-839796	20010419
JP 2002325575	A	JP 2001-122200	20010420

PRIORITY APPLN. INFO: EP 2000-201421 20000421

AB EP 1149901 A UPAB: 20020114

NOVELTY - Pestivirus (A) containing one or more mutations in the region containing stem-loops Ia or Ib in the 5'-nontranslated region (NTR) of the genome, resulting in a small plaque phenotype. Expression of the viral polyprotein is controlled by a homologous internal ribosome entry site (IRES) and the sequence at the 5'-end of the genome is GUAU.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a **vaccine** containing live, attenuated (A).

ACTIVITY - Virucide. No details of tests for virucidal activity are given.

MECHANISM OF ACTION - Induction of a specific immune response.

USE - (A) is used to prepare **vaccines** for treatment or prevention of diseases caused by pestivirus (claimed), especially bovine viral diarrhea but also classical swine fever and border disease.

ADVANTAGE - (A) have reduced ability to replicate, relative to the wild type, so are safe to use, but remain highly immunogenic and genetically stable. When MDBK cells were infected with genomic RNA of the CP7-5A strain of bovine viral diarrhea virus, infectivity was 0.24-0.6 million plaque-forming units (pfu)/ mu g. For a series of mutants that lacked parts of the Ia or Ib stem-loop structures, the corresponding figures were 5200-64000 pfu/ mu g.

Dwg.0/8

L76 ANSWER 31 OF 37 WPIDS (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1995-233119 [31] WPIDS

DOC. NO. CPI: C1995-107576

TITLE: Intranasal **bovine vaccine** against respiratory disease complex. - comprises modified, live **bovine** rhinotracheitis virus **bovine parainfluenza** sub-type 3 virus and **bovine** respiratory syncitial virus.

DERWENT CLASS: B04 C06 D16

INVENTOR(S): CISZEWSKI, D K; MCGINLEY, M J; PHILLIPS, C S; SCHNURR, M J

PATENT ASSIGNEE(S): (MILE) MILES INC; (FARB) BAYER CORP

COUNTRY COUNT: 14

PATENT INFORMATION:

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PATENT NO    KIND DATE     WEEK       LA   PG
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EP 661059 A2 19950705 (199531)* EN 13
R: AT BE CH DE DK ES FR GB IT LI NL
AU 9480497 A 19950706 (199534)
CA 2136677 A 19950630 (199539)
ZA 9410347 A 19960424 (199622) 23
EP 661059 A3 19960703 (199636)
AU 691842 B 19980528 (199833)
EP 661059 B1 20011128 (200201) EN
R: AT BE CH DE DK ES FR GB IT LI NL
DE 69429238 E 20020110 (200211)
ES 2168284 T3 20020616 (200246)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 661059	A2	EP 1994-119949	19941216
AU 9480497	A	AU 1994-80497	19941215
CA 2136677	A	CA 1994-2136677	19941125
ZA 9410347	A	ZA 1994-10347	19941228
EP 661059	A3	EP 1994-119949	19941216
AU 691842	B	AU 1994-80497	19941215
EP 661059	B1	EP 1994-119949	19941216
DE 69429238	E	DE 1994-629238	19941216
		EP 1994-119949	19941216
ES 2168284	T3	EP 1994-119949	19941216

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 691842	B	Previous Publ.	AU 9480497
DE 69429238	E	Based on	EP 661059
ES 2168284	T3	Based on	EP 661059

PRIORITY APPLN. INFO: US 1993-175093 19931229
AB EP 661059 A UPAB: 19950921
Safe and effective intranasal bovine **vaccine** comprises a nonvirulent, modified, live, infectious bovine rhinotracheitis virus (IBRV), a modified, live **bovine parainfluenza** subtype 3 virus (P13V) and a non-virulent bovine respiratory syncytial virus (BRSV).

USE - The trivalent **vaccine** is useful for intranasally **vaccinating** cattle against the respiratory disease complex.

ADVANTAGE - The **vaccine** is safe and effective. It protects cattle without inducing adverse events or signs of disease. There is no interference between the viruses.

Dwg.0/4

L76 ANSWER 32 OF 37 WPIDS (C) 2003 THOMSON DERWENT
ACCESSION NUMBER: 1994-147865 [18] WPIDS
DOC. NO. NON-CPI: N1994-116303
DOC. NO. CPI: C1994-067926
TITLE: Prevention of **bovine** respiratory diseases - by direct admin. of **vaccine** into trachea using catheter.
DERWENT CLASS: B07 C06 P14 P34
PATENT ASSIGNEE(S): (ASAH) ASAHI KASEI KOGYO KK
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 06092868	A	19940405	(199418)*		5

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 06092868	A	JP 1992-241805	19920910

PRIORITY APPLN. INFO: JP 1992-241805 19920910
AB JP 06092868 A UPAB: 19940622
The prevention of bovine respiratory diseases is carried out by directly administering **vaccine** into the bifurcation of trachea using a catheter of a length reaching the bifurcation of trachea of the cattle.

ADVANTAGE - This direct admin. method of preventing respiratory diseases in cattle produces a high blood antibody titre and exerts excellent preventive effects on bovine respiratory diseases compared with conventional methods, e.g. subcutaneous, intramuscular admin. intranasal spray, etc..

In an example, 15 calves not yet inoculated with parainfluenza type III **vaccine** were divided into three groups. Cattle of group 1 were treated with intramuscular admin. of 1.0-ml soln. of **bovine parainfluenza** live **vaccine**. Cattle of group 2 were given spray admin. of the same soln. as described above (0.5 ml to each nostril). Cattle of group 3 were intratracheally given spray of the 1.0-ml soln. diluted at 10:1 with physiological saline. Antibody titre after ten weeks was 26,80 in group 1; 10.97 in group 2; and 71.92 in group 3. In addn., group 3 had no member suffering pneumonia (0 %), while groups 1 and 2 had 40% incidence of pneumonia (2/5), respectively.
Dwg.0/0

L76 ANSWER 33 OF 37 WPIDS (C) 2003 THOMSON DERWENT
ACCESSION NUMBER: 1990-228484 [30] WPIDS
DOC. NO. CPI: C1990-098697
TITLE: **Recombinant vaccinia** virus - contg. all/part of a DNA encoding **bovine** parain fluenza type III membrane fusion protein - is which all or part of DNA coding membrane fusion protein in combined to genom region.
DERWENT CLASS: B04 C03 D16
PATENT ASSIGNEE(S): (JAPG) NIPPON ZEON KK
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 02156883	A	19900615	(199030)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 02156883	A	JP 1988-311655	19881209

PRIORITY APPLN. INFO: JP 1988-311655 19881209
AB JP 02156883 A UPAB: 19930928
A **recombinant vaccinia** virus (I) is claimed in which all or part of cDNA coding membrane fusion protein originated from

bovine parainfluenza type III is combined to the genom region non-essential for the growth of (I), pref. DNA being under the control of a promotor.

USE/ADVANTAGE - (I) can be used as a live **vaccine** for cow.

In an example mRNA is extracted from BP1V3M strain-infected cell. A **plasmid** contg. BP1V3M strain **HN** gene (M176) is constructed by Okayama-Berg method (Fig.1) and screened. A **recombinant plasmid** contg. BP1V3SC strain **HN** gene (SC130) is constructed and screened. A **recombinant plasmid** contg. BP1V3MR strain **HN** gene (MR2-9) is constructed and screened. @

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L76 ANSWER 34 OF 37 WPIDS (C) 2003 THOMSON DERWENT
ACCESSION NUMBER: 1989-004262 [01] WPIDS
DOC. NO. CPI: C1989-002249
TITLE: **Recombinant vaccinia** virus - has partial or complete cDNA encoding haemagglutinin neuraminidase derived from **bovine** para influenza type iii.
DERWENT CLASS: B04 C03 D16
PATENT ASSIGNEE(S): (SHIB-I) SHIBUTA H
COUNTRY COUNT: 2
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 63283578	A	19881121	(198901)*		10
AU 8781322	A	19881117	(198911)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 63283578	A	JP 1987-119967	19870516

PRIORITY APPLN. INFO: JP 1987-119967 19870516

AB JP 63283578 A UPAB: 19930923

The **recombinant vaccinia** virus has a partial or complete cDNA encoding haemagglutinin neuraminidase derived from **bovine parainfluenza** type III at genome region for the proliferation of **vaccinia** virus.

A DNA region dispensable for the proliferation of **vaccinia** virus includes thymidine kinase (TK) gene, hemagglutinin (HA) gene, and **F**, M, or N fragment of Hind III of DNA is selected. The DNA region is then combined with a suitable **vector** e.g. pBR322, pBR325, pBR327, pUC7, pUC8, pUC19. A region encoding bovine hemagglutinin neuraminidase of **bovine parainfluenza** virus is inserted at downstream of the **vector**. The obtd. **vector** is then introduced into cultured cells of **vaccinia** virus infected animal cells to build up the **recombinant vaccinia** virus. The cultured animal cells include e.g. TK-143 (derived from human osteosarcoma), FL (derived from human amnion), Hela (derived human cervical cancer), CV-1 (derived from kidneys of monkey), and L929 (derived from mice connective tissue), CEF (chicken embryo fibroblast cells). The **recombinant vaccinia** virus can be organised by conventional methods.

USE/ADVANTAGE - New live **vaccine** for the treatment of **bovine parainfluenza** type III.

0/6

L76 ANSWER 35 OF 37 WPIDS (C) 2003 THOMSON DERWENT
ACCESSION NUMBER: 1985-303068 [49] WPIDS
DOC. NO. CPI: C1985-131256
TITLE: Synthetic DNA gene coding for **bovine parainfluenza** virus protein - useful as diagnostic reagent and in **vaccines**.
DERWENT CLASS: B04 C03 D16
PATENT ASSIGNEE(S): (GRAC) GRACE & CO W R
COUNTRY COUNT: 11
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
BE 902921	A	19851118	(198549)*		55
GB 2161814	A	19860122	(198604)		
DE 3524736	A	19860130	(198606)		
FR 2567905	A	19860124	(198610)		
AU 8544417	A	19860123	(198611)		
NL 8502063	A	19860217	(198612)		
DK 8503261	A	19860119	(198616)		
ES 8608581	A	19861201	(198705)		
CN 85100949	A	19870110	(198805)		
US 4743553	A	19880510	(198821)		
US 4847081	A	19890711	(198935)		
IT 1187689	B	19871223	(199044)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2161814	A	GB 1985-17994	19850717
DE 3524736	A	DE 1985-3524736	19850711
FR 2567905	A	FR 1985-10975	19850717
NL 8502063	A	NL 1985-2063	19850717
ES 8608581	A	ES 1985-545299	19850717
US 4743553	A	US 1984-632106	19840718

PRIORITY APPLN. INFO: US 1984-632106 19840718; US 1987-14499 19870330

AB BE 902921 A UPAB: 19930925
New synthetic gene or DNA fragment (1) codes for a **bovine parainfluenza** 3 (PI-3) viral protein or fragment and (2) consists of a double-strand DNA gene which is a copy of the viral RNA gene coding for the protein. Esp. the gene codes for viral haemagglutinin and includes appropriate start and finish codons, or codes for a fusion prod. Also new are (1) **vectors** or **plasmids** contg. this gene and (2) host cells contg. these **vectors**.
USE - Culture of transformed cells produces viral proteins which are useful as diagnostic reagents and **vaccines**. The genes themselves are also useful as diagnostic reagents.
0/0

L76 ANSWER 36 OF 37 WPIDS (C) 2003 THOMSON DERWENT
ACCESSION NUMBER: 1974-83725V [48] WPIDS
TITLE: **Bovine** para-influenza type III dry live **vaccine** - prepd. from disinfected virus on specific culture medium.
DERWENT CLASS: B04 C03 D16 P32
PATENT ASSIGNEE(S): (KACH-N) KACHIKU EISEI SHIKENJO

COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 49040926	B	19741106	(197448)*		

PRIORITY APPLN. INFO: JP 1970-106786 19701204
AB JP 74040926 B UPAB: 19930831
The **bovine parainfluenza** type III virus is grown on chicken embryo cells, bovine kidney cells, bovine testis cells or pig kidney cells to obtain a raw liq. **vaccine** which is mixed with stabilisers and lyophilised to give a dry live **vaccine**.

L76 ANSWER 37 OF 37 WPIDS (C) 2003 THOMSON DERWENT
ACCESSION NUMBER: 1973-21710U [16] WPIDS
TITLE: **Vaccines** - against **bovine** pneumonia.
DERWENT CLASS: B04 C03 D16
PATENT ASSIGNEE(S): (WELL) WELLCOME FOUND LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 1313851	A		(197316)*		

PRIORITY APPLN. INFO: GB 1969-5654 19690203; GB 1969-24334 19690513
AB GB 1313851 A UPAB: 19930831
Polyvalent **vaccine** for prevention of bovine pneumonia caused by infections with the bovine PI 3 virus (**bovine parainfluenza**-43) or the BAY 3 virus (bovine adenovirus-3) comprises a water-in-oil emulsion of an aq. suspension of an effective dosage of the antigen bovine PI 3 virus, inactivated by treatment with a fully or partially chlorinated or chlorofluorinated solvent in the presence of non-ionic hydrophilic surfactant, and completely inactivated BAV3 virus antigen, in a mineral oil of biological grade, a liphilic emulsifier and hydrophilic emulsifier. The BAV 3 virus may be inactivated with HCHO. The **vaccine** may also contain an effective dosage of antigens of a purified strain of organisms of the psittacosis lymphogranulomaveneroum group (Bedsonia) which has been inactivated, sepd. from its culture medium and resuspended before emulsification.

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